Health Alert: Pertussis Exposure at a Camp for HIV-Affected Persons

August 27, 2004

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The Missouri Department of Health & Senior Services (DHSS) is now using 4 types of documents to provide important information to medical and public health professionals, and to other interested persons:

Health Alerts convey information of the highest level of importance which warrants immediate action or attention from Missouri health providers, emergency responders, public health agencies, and/or the public.

Health Advisories provide important information for a specific incident or situation, including that impacting neighboring states; may not require immediate action.

Health Guidances contain comprehensive information pertaining to a particular disease or condition, and include recommendations, guidelines, etc. endorsed by DHSS.

Health Updates provide new or updated information on an incident or situation; can also provide information to update a previously sent Health Alert, Health Advisory, or Health Guidance; unlikely to require immediate action.

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Health Alert
August 27, 2004

FROM: **RICHARD C. DUNN**
DIRECTOR

SUBJECT: **Pertussis Exposure at a Camp for HIV-Affected Persons**

On August 25, 2004, the Office of Epidemiology of the Nebraska Health & Human Services System learned of a Missouri resident who attended a Nebraska summer camp (Camp Kindle, also known as Camp Catron) in Nebraska City while symptomatic with *Bordetella pertussis*. This illness was confirmed by PCR upon returning to Missouri. The attendee arrived on August 2 and departed on August 8. The camp was targeted to persons affected by HIV and their families. Investigators have identified several persons who were at the camp during that week, who have subsequently developed symptoms consistent with whooping cough, and are undergoing diagnostic tests and therapy.

Including patrons and staff, 134 persons from 10 states (AZ, CA, CO, IL, IA, KS, KY, MO, NE, and UT) were exposed. Attendees and camp counselors at the camp that week are from the following states:

State	# of Attendees
Arizona	3
California	7
Colorado	35
Illinois	26
Iowa	2
Kansas	2
Kentucky	1
Missouri	**12**
Nebraska	45
Utah	1
Total:	**134**

Individuals known to have had contact with the case (to include all persons in attendance at the camp) are being contacted by public health officials, and told that they may have been exposed to pertussis. In addition, public health officials are recommending post exposure prophylaxis (PEP) for all attendees and counselors, with the caveat to work with their healthcare providers in case the physician feels that benefits of watchful waiting outweigh the possible side effects from the antibiotic. (For example, the attendee/counselor might be on anti-HIV medications that would interact with the antibiotic.)

The recommended antibiotic for prophylaxis would be azithromycin for 5 days or erythromycin for 14 days. TMP-SMX for 14 days should be used if neither azithromycin nor erythromycin can be given.

The recommended dose of azithromycin is10-12 mg/kg per day orally in one dose (maximum 500 mg/d) for 5-7 days.

The recommended dose of erythromycin is 40 to 50 mg/kg per day and in adults 1 to 2 g/day orally in 4 divided doses for 14 days (maximum 2 g/day). Some experts recommend the use of erythromycin estolate, because it achieves higher serum levels compared to erythromycin ethylsuccinate or stearate when equal doses are given. Infantile hypertrophic pyloric stenosis (IHPS) in neonates has been reported following the use of erythromycin; in one case, pyloric stenosis developed in a breast feeding infant whose mother took erythromycin. In 1999, a cluster of seven cases of IHPS were reported among neonates (all aged <3 weeks when prophylaxis was started) who had taken erythromycin for prophylaxis after exposure to a pertussis case in the hospital. In the cohort study conducted among infants born in the hospital, erythromycin prophylaxis was associated with having IHPS diagnosis and pyloromyotomy [7 cases out of 157 erythromycin-exposed infants vs. zero cases out of 125 infants with no erythromycin exposure; relative risk: infinity (95% CI: 1.7-infinity)]. The high case-fatality ratio of pertussis in neonates demonstrates the need to prevent pertussis in this age group. However, unnecessary prophylaxis in neonates should be avoided. Physicians who prescribe erythromycin to newborns should inform parents about the possible risks for IHPS and counsel them about signs of developing IHPS.

The recommended dosage for children is trimethoprim 8 mg/kg/day, sulfamethoxazole 40 mg/kg/day in two divided doses for 14 days. The recommended dosage for adults is trimethoprim 320 mg/day, sulfamethoxazole 1600 mg/day in two divided doses for 14 days. Because of the risk of kernicterus (a condition with severe neural symptoms, associated with high levels of bilirubin in the blood), TMP-SMZ should not be given to pregnant women at term, nursing mothers, or infants aged <2 months.

If persons attending the camp have symptoms that are suggestive of pertussis, they should be tested (culture and PCR) for pertussis and then treated (with the same antibiotics as above). These individuals should be isolated until they has been on antibiotics for 5 days, and their close contacts should receive PEP.

Pertussis testing (culture and PCR) can be performed by the Missouri State Public Health Laboratory (MSPHL). Kits and instructions are obtained by calling the MSPHL at (573) 751-0633 (Mon-Fri, 8:00 am to 5:00 pm). Your local public health agency MAY also have some kits available in the case of an emergency. Shipping is provided free via state courier service. Courier stops include all local public health agencies (LPHAs) as well as many hospitals and laboratories. Pick up is Monday through Friday year round (including holidays). Packages are delivered to MSPHL the next morning. Call your LPHA for details of pick up sites and times.

Specimens collected after the Friday courier pick up should be stored in the refrigerator and put on the courier Monday morning. Please ship the specimens cold.

Preliminary PCR results are phoned to the submitter the day that the specimens are received (if received before 11:00 am Mon-Fri) (specimens received Saturday will be tested on Monday). Final results including culture could be as long as 10 days after receipt. Negative results will be mailed; positive results will be telephoned and mailed.

Any individual suspected of having pertussis should be immediately reported to the LPHA, or to the Missouri Department of Health & Senior Services (DHSS) at 800-392-0272 (24 hours a day - 7 days a week).

The next two pages provide a summary of the clinical features of pertussis.

Questions should be directed to the LPHA, or to DHSS's Disease Investigation Unit at 573/751-6113, or 800-392-0272 (24 hours a day - 7 days a week).

Pertussis (Whooping Cough)
FACT SHEET

What is pertussis?
Pertussis (whooping cough) is a highly contagious, bacterial disease marked by severe coughing. It is named after the "whoop" sound children and adults make when they try to breathe in during or after a severe coughing spell.

Who gets it?
Pertussis can occur at any age, but infants and young children are at highest risk of life-threatening consequences. Undiagnosed mild disease in older children, adolescents, and adults contributes to the spread of the illness among infants and young children.

How is it spread?
Pertussis is caused by a bacteria found in the mouth, nose and throat of an infected person. Transmission to others occurs during close contact with an infected person, most commonly by airborne droplets of respiratory secretions.

What are the symptoms?
Pertussis usually starts with cold or flu-like symptoms such as runny nose, sneezing, fever and a mild cough. These symptoms can last up to 2 weeks and are followed by increasingly severe coughing spells. The coughing attacks may last for many months in the "classic illness" or just a few days in the mild form of the disease. Mild pertussis disease is difficult to diagnose because its symptoms mimic those of a cold. Usually a prolonged cough is present, but without the "whoop". Recovery occurs gradually over 2 to 3 weeks. Fever, if present, is usually mild.

How soon do symptoms appear?
Symptoms appear between 6 to 21 days (average 7-10) after exposure to the bacteria.

When and for how long can it be spread?
The contagious period is from 7 days following exposure to 3 weeks after onset of severe coughing spells. It is most contagious during the first two to three weeks of infection, often before the beginning of severe coughing spells.

Does past infection with pertussis make a person immune?
Children who have recovered from culture-confirmed pertussis do not need further doses of pertussis vaccine.

How do you treat it?
Pertussis is treated with antibiotics and patients are advised to take all prescribed medication and avoid contact with anyone, particularly small infants and children. Anyone who is exposed to pertussis should also be given antibiotics to prevent the disease.

What are some potential complications?

Pneumonia is the most common complication and cause of pertussis-related deaths. Young infants are at highest risk for pertussis-related complications, including seizures, encephalopathy (swelling of the brain), and otitis media (severe ear infection). There are about 10-15 deaths each year in the United States.

How do you prevent it?

Immunization against pertussis with DTaP vaccine is recommended by both the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Pediatrics (AAP) and should be administered in 5 doses: at 2, 4, 6, and 15-18 months of age and 4 – 6 years of age. The vaccine is not given to people 7 years of age and older.

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